

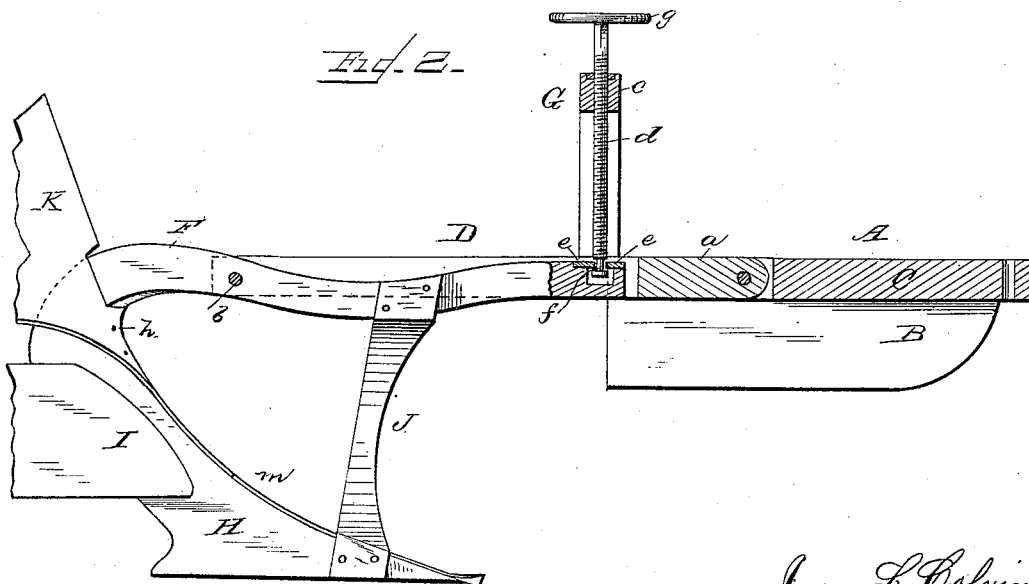
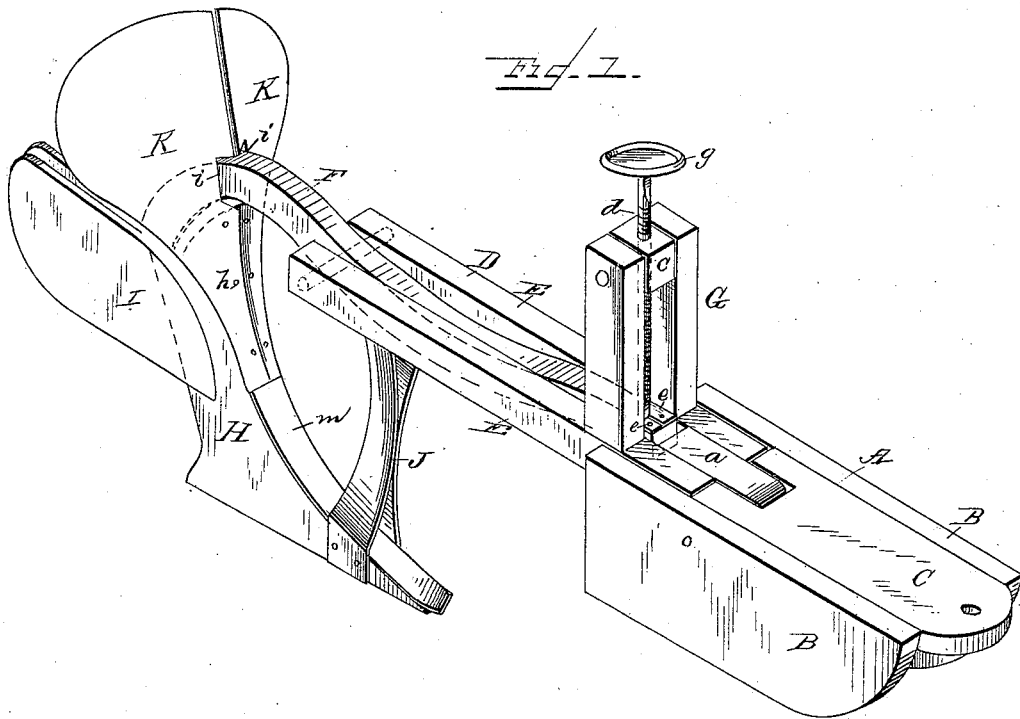
(No Model.)

I. L. COLVIN.

DITCHING PLOW.

No. 304,295.

Patented Sept. 2, 1884.



WITNESSES
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ISAAC L. COLVIN, OF OLNEY, ILLINOIS.

DITCHING-PLOW.

SPECIFICATION forming part of Letters Patent No. 304,295, dated September 2, 1884.

Application filed May 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, ISAAC L. COLVIN, a citizen of the United States of America, residing at Olney, in the county of Richland and State of Illinois, have invented certain new and useful Improvements in Ditching-Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to ditching-plows; and it consists in the improvements hereinafter described and set forth.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a ditching-plow constructed in accordance with my invention, and Fig. 2 is a longitudinal section of the same.

A represents a sled or traveling frame provided with the side runners, B, and central platform, C, connecting said runners, the said sled being of a width sufficient to span the ditch in which it is designed the plow shall operate. The rear end of the platform C is recessed to receive a tongue, *a*, of an intermediate frame, D, a pivot-bolt passing transversely through the runners B, platform C, and tongue *a*, permitting the vertical play of said intermediate frame on said pivot-bolt with respect to the sled A. Parallel side bars, E, of the intermediate frame, D, extend rearwardly, as illustrated, to receive between them the horizontal portion of the beam F of the ditching-plow, the said beam being pivoted near the rear ends of the bars E by a transverse bolt, *b*, as shown in Fig. 2, and by dotted lines, Fig. 1. The intermediate frame, D, carries at its forward end, adjacent to the tongue *a*, a vertical frame, G, in the head-block *c* of which frame turns a threaded rod, *d*, the lower end of which is headed to rest in a recess therefor, formed near the forward end of the beam F. - The withdrawal of the headed end of the rod *d* from the beam-recess is prevented by means of plates *e*, secured on the upper side of the beam F and embracing

the contracted portion *f* of the rod *d*. A hand-wheel, *g*, is keyed on the upper extremity of the rod *d*. The beam F is curved and prolonged to form a standard and a curved shoe, H, rear extensions of said shoe being adapted to contact with the sides of the ditch. Colter-blades J are secured at their respective ends to the sides of the lower forward portions of the shoe H, and to the sides of the beam F, between the pivot-bolt *b* and its forward end. The said colter-blades are curved inward toward each other, as indicated in Fig. 1. Two metal sections, K K, have their lower extended portions, *h*, bolted on the front face of the upper portion of the shoe H, and are cut away at *i* to snugly embrace the beam F, as illustrated in Fig. 1. The said metal sections K K incline rearward from their adjacent edges to constitute deflecting mold-boards.

From the foregoing it will be apparent that the arrangement and connection of intermediate frame, D, and sled A permits the sled to readily pass over uneven ground without conveying the jolting motions so acquired to the said intermediate frame, D. Moreover, by manipulating the hand-wheel *g* and revolving the threaded rod *d* the forward end of the beam F may be elevated or depressed, and the rear end of said beam, together with its accessories, lifted or lowered in the ditch. As the plow moves forward in the ditch, the colter-blades J cut the earth which lodges between them and forces its way up the front inclined face, to be finally deflected off to either side of the ditch. The shoe-extensions I pack and compress the earth at either side of the ditch.

The lower portion of the front face of the shoe H is preferably faced with a curved metallic plate, *m*, which is bladed at its lower extremity to present a knife-edge at the front of the shoe H.

I do not limit myself to the precise construction and arrangement of devices for effecting the vertical adjustment of the front end of the beam F, as the same may be modified or altered and still remain within the scope of my invention. Thus, for instance, the hand-wheel *g* may be in the form of a nut journaled in the head *c*, and by the revolution of

which nut the threaded rod *d* may be elevated or depressed.

I claim—

1. The combination, in a ditching-plow, of
5 a main sled or traveling carriage, an intermediate frame pivotally attached thereto, a beam carrying the ditching-plow at one end, and pivotally secured to said intermediate frame, and devices for vertically adjusting the forward
10 end of said beam, substantially as and for the purpose set forth.

2. The combination, in a ditching-machine, of a main sled or traveling carriage, an intermediate frame provided at its front with a
15 projecting tongue engaging a pivot-bolt on the main sled or carriage, a beam pivotally secured at the rear end of the intermediate frame, and carrying the ditching-plow at its rear, a vertical frame supported at the front
20 of the intermediate frame, and provided with a vertically-traveling threaded rod engaging

the front end of the said beam, and hand devices for rotating said rod, substantially as specified.

3. The combination, in a ditching-plow constructed and arranged substantially as set
25 forth, of a beam, *F*, terminating at its lower end in a shoe, *H*, and curved colter-blades secured to the sides of said shoe and beam, as and for the purpose set forth. 30

4. The combination, in a ditching-plow arranged and constructed substantially as described, of a beam terminating at its rear end in a shoe, *H*, provided with the parallel rearward extensions *I*, and having the mold-
35 boards *K*, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ISAAC L. COLVIN.

Witnesses:

HARRISON M. SPAIN,
JOHN J. RIDER.